

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

REC'D 2 5 FEB 2005

PCT

To:

see form PCT/ISA/220

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/US2004/001930

International filing date (day/month/year)  
23.01.2004

Priority date (day/month/year)

International Patent Classification (IPC) or both national classification and IPC  
H01J29/07

Applicant  
THOMSON LICENSING S.A.

### 1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

### 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

### 3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office  
D-80298 Munich  
Tel. +49 89 2399 - 0 Tx: 523656 epmu d  
Fax: +49 89 2399 - 4465

Authorized Officer

Weisser, W

Telephone No. +49 89 2399-2613



**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US2004/001930

---

**Box No. 1 Basis of the opinion**

---

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material:  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing:  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US2004/001930

**Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application,
- ☒ claims Nos. 7,17,18,22,24

because:

- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):
- ☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 7,17,22,24 are so unclear that no meaningful opinion could be formed (*specify*):

**see separate sheet**

- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- ☐ no international search report has been established for the whole application or for said claims Nos.
- ☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form

- ☐ has not been furnished
- ☐ does not comply with the standard

the computer readable form

- ☐ has not been furnished
- ☐ does not comply with the standard

- ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.
- ☐ See separate sheet for further details

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US2004/001930

---

**Box No. V Reasoned statement under Rule 43b/s.1(a)(i) with regard to novelty, inventive step or  
Industrial applicability; citations and explanations supporting such statement**

---

**1. Statement**

Novelty (N)	Yes: Claims	1-6,8,11,19-21,23
	No: Claims	9,10,12-16
Inventive step (IS)	Yes: Claims	1-6,8,11,19-21,23
	No: Claims	9,10,12-16
Industrial applicability (IA)	Yes: Claims	
	No: Claims	-

**2. Citations and explanations**

**see separate sheet**

1. In this communication the following documents will be referred to:

D1: SHIRAMATSU N. ET AL.: "Practical method for evaluating the visibility of moire patterns for CRT design" PROCEEDINGS OF THE SPIE, vol. 2408, 1995, XP001205407 SAN JOSE, CA, USA  
D2: BARTEN R G J: "Resolution of data display tubes" PROCEEDINGS OF THE SID, vol. 25, no. 1, 1983, XP009043949 PHILADELPHIA, PA, USA

2. Claim 9 appears to lack to define an essential feature, necessary to define the present invention, i.e. that the aperture pitch decreases with increasing distance from a central aperture column (cf. claims 1, 19; and page 3, line 30 - page 4, line 15) (Art.6 PCT).

Claim 24 and dependent claims 7, 17, 22 define the desired result that the moiré transformation function is less than about 0.02. Said claims thereby merely define a desired result to be achieved without in clear terms setting out the means necessary for obtaining this result. In order to meet the requirements of Art.6 PCT the applicant is therefore requested to amend said claims by adding the essential features, which are necessary to obtain said result. I.e. claim 24 should at least comprise the definition of

- the ratio of beam spot size and aperture pitch and
  - the decrease of the aperture pitch with decreasing distance from a central aperture column as defined in claim 1 (cf. claims 1, 19; page 3, line 30 - page 4, line 15; page 9, line 1-13).
- Claims 7, 17, 18 (dependent on claim 17), 22 and 24 can therefore not be examined with regard to Art.33.

In claim 18 the wording "The CRT according to claim 17 ..." is not clear, with claim 17 referring to a 'display device'.

In claim 24, line 24 the term "The CRT ..." lacks a proper antecedent basis. Further, the wording "... on said that can propagate therethrough said apertures averaged ..." cannot be understood. In line 2 (page 16) the term "said regions" lacks a proper antecedent basis.

In order to meet the requirements of Art.6 PCT the applicant is asked to clarify these points in any new claims to be filed.

3. D1 discloses a display device as defined in present claim 9. In addition to the general features defined in present claim 9, on page 12, line 28 - page 13, line 11, D1 further comprises the feature that the ratio of the spot size (5% limit; parallel to the aperture columns) to the aperture pitch of the column apertures exceeds a value of about 0.9 along at least two sweeps. In Fig.6 of D1 a spot size of 0.660mm, 0.754mm and 0.850mm and an aperture pitch of 0.382mm is disclosed. Said ratio thereby exceeds 0.9.

The subject matter of present claim 9 is therefore not new (Art.33.2 PCT) with regard to D1.

The subject matter of present claim 9 is also not new (Art.33.2 PCT) with regard to D2. In D2 said ratio is e.g. 2.57 (cf. page 42, equation 19).

- 3.1 The additional subject matter of dependent claims 10 and 12-16 is either directly disclosed in D1 and D2 (cf. above indicated citations in D1 and D2) or belongs to evidently implicit features of the CTRs disclosed therein. The subject matter of dependent claims 10 and 12-16 is therefore not new with regard to D1 and D2.

4. The subject matter of claim 1-6, 8, 11 and 19-23 appears to be new and inventive (Art.33.2,3 PCT).

The subject matter of claims 1-24, as far as it is clear, appears to be industrially applicable (Art.33.4 PCT).

5. The applicant is requested to file new application documents taking into account the above objections.

The applicant is asked to show where a basis for the amendments can be found in the original application documents (Art. 34.2b PCT). He is further requested to indicate in the letter of reply the difference of the subject matter of the new claims vis-à-vis the state of the art and the significance thereof.

In case that more than one independent claims are filed, the applicant is asked to show that the requirements of Rule 13.1 PCT are met.

The independent claim should follow the two-part form, delimited with respect to the closest prior art (Rule 6.3b,ii PCT). Reference signs in parentheses should be inserted in the claims to increase their intelligibility (Rule 6.2b PCT).

The description must be brought into conformity with any new claims to be filed. In order to

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/US2004/001930

meet the requirements of Rule 5.1a,ii PCT the most relevant document(s) should be identified in the description.

\*\*\*\*\*



# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

REC'D 25 FEB 2005

PCT

WFO

PCT

To:

see form PCT/ISA/220

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/US2004/001930

International filing date (day/month/year)  
23.01.2004

Priority date (day/month/year)

International Patent Classification (IPC) or both national classification and IPC  
H01J29/07

Applicant  
THOMSON LICENSING S.A.

### 1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

### 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

### 3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office  
D-80298 Munich  
Tel. +49 89 2399 - 0 Tx: 523656 epmu d  
Fax: +49 89 2399 - 4465

Authorized Officer

Weisser, W

Telephone No. +49 89 2399-2613





**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US2004/001930

**Box No. I Basis of the opinion**

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material:  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing:  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US2004/001930

**Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 7,17,18,22,24

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 7,17,22,24 are so unclear that no meaningful opinion could be formed (*specify*):

**see separate sheet**

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the whole application or for said claims Nos.

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form

☐ has not been furnished

☐ does not comply with the standard

the computer readable form

☐ has not been furnished

☐ does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.

☐ See separate sheet for further details

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US2004/001930

---

**Box No. V Reasoned statement under Rule 43b/s.1(a)(i) with regard to novelty, inventive step or  
Industrial applicability; citations and explanations supporting such statement**

---

**1. Statement**

Novelty (N)	Yes: Claims	1-6,8,11,19-21,23
	No: Claims	9,10,12-16
Inventive step (IS)	Yes: Claims	1-6,8,11,19-21,23
	No: Claims	9,10,12-16
Industrial applicability (IA)	Yes: Claims	
	No: Claims	-

**2. Citations and explanations**

**see separate sheet**

1. In this communication the following documents will be referred to:

- D1: SHIRAMATSU N. ET AL.: "Practical method for evaluating the visibility of moire patterns for CRT design" PROCEEDINGS OF THE SPIE, vol. 2408, 1995, XP001205407 SAN JOSE, CA, USA  
D2: BARTEN R G J: "Resolution of data display tubes" PROCEEDINGS OF THE SID, vol. 25, no. 1, 1983, XP009043949 PHILADELPHIA, PA, USA

2. Claim 9 appears to lack to define an essential feature, necessary to define the present invention, i.e. that the aperture pitch decreases with increasing distance from a central aperture column (cf. claims 1, 19; and page 3, line 30 - page 4, line 15) (Art.6 PCT).

Claim 24 and dependent claims 7, 17, 22 define the desired result that the moiré transformation function is less than about 0.02. Said claims thereby merely define a desired result to be achieved without in clear terms setting out the means necessary for obtaining this result. In order to meet the requirements of Art.6 PCT the applicant is therefore requested to amend said claims by adding the essential features, which are necessary to obtain said result. I.e. claim 24 should at least comprise the definition of

- the ratio of beam spot size and aperture pitch and
  - the decrease of the aperture pitch with decreasing distance from a central aperture column as defined in claim 1 (cf. claims 1, 19; page 3, line 30 - page 4, line 15; page 9, line 1-13).
- Claims 7, 17, 18 (dependent on claim 17), 22 and 24 can therefore not be examined with regard to Art.33.

In claim 18 the wording "The CRT according to claim 17 ..." is not clear, with claim 17 referring to a 'display device'.

In claim 24, line 24 the term "The CRT ..." lacks a proper antecedent basis. Further, the wording "... on said that can propagate therethrough said apertures averaged ..." cannot be understood. In line 2 (page 16) the term "said regions" lacks a proper antecedent basis.

In order to meet the requirements of Art.6 PCT the applicant is asked to clarify these points in any new claims to be filed.

3. D1 discloses a display device as defined in present claim 9. In addition to the general features defined in present claim 9, on page 12, line 28 - page 13, line 11, D1 further comprises the feature that the ratio of the spot size (5% limit; parallel to the aperture columns) to the aperture pitch of the column apertures exceeds a value of about 0.9 along at least two sweeps. In Fig.6 of D1 a spot size of 0.660mm, 0.754mm and 0.850mm and an aperture pitch of 0.382mm is disclosed. Said ratio thereby exceeds 0.9.

The subject matter of present claim 9 is therefore not new (Art.33.2 PCT) with regard to D1.

The subject matter of present claim 9 is also not new (Art.33.2 PCT) with regard to D2. In D2 said ratio is e.g. 2.57 (cf. page 42, equation 19).

- 3.1 The additional subject matter of dependent claims 10 and 12-16 is either directly disclosed in D1 and D2 (cf. above indicated citations in D1 and D2) or belongs to evidently implicit features of the CTRs disclosed therein. The subject matter of dependent claims 10 and 12-16 is therefore not new with regard to D1 and D2.

4. The subject matter of claim 1-6, 8, 11 and 19-23 appears to be new and inventive (Art.33.2,3 PCT).  
The subject matter of claims 1-24, as far as it is clear, appears to be industrially applicable (Art.33.4 PCT).

5. The applicant is requested to file new application documents taking into account the above objections.  
The applicant is asked to show where a basis for the amendments can be found in the original application documents (Art. 34.2b PCT). He is further requested to indicate in the letter of reply the difference of the subject matter of the new claims vis-à-vis the state of the art and the significance thereof.  
In case that more than one independent claims are filed, the applicant is asked to show that the requirements of Rule 13.1 PCT are met.  
The independent claim should follow the two-part form, delimited with respect to the closest prior art (Rule 6.3b,ii PCT). Reference signs in parentheses should be inserted in the claims to increase their intelligibility (Rule 6.2b PCT).  
The description must be brought into conformity with any new claims to be filed. In order to

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)**

International application No.

**PCT/US2004/001930**

meet the requirements of Rule 5.1a,ii PCT the most relevant document(s) should be identified in the description.

\* \* \* \* \*